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Assessing Teachers' Knowledge of Intellectual Disability in Government and Private Primary Schools of Bhopal District

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Abstract

Teachers' knowledge is important in delivering inclusive and effective education as intellectual disability is a major developmental condition that affects a person's cognitive functioning, adaptive behavior and learning abilities. The present study is an attempt to assess the level of knowledge regarding intellectual disability amongst teachers working in government and private primary schools of Bhopal District and to compare the level of understanding amongst the teachers working in different school settings. The study employed a descriptive comparative research design and primary data were collected from primary school teachers through a validated questionnaire. The t-test and One Way ANOVA were used to find the knowledge of teachers and to find the difference between government and private school teachers. The findings indicate that majority of the teachers have basic knowledge of intellectual disability but differ in their knowledge of characteristics, early identification, classroom management, instructional strategies and inclusive education practices of children with intellectual disabilities. Teachers with previous training or exposure to special education had relatively higher knowledge and confidence in supporting children with intellectual disabilities. The study recommends the implementation of continuous professional development programmes, specialized training and capacity-building initiatives to enhance teachers' competencies in inclusive education. It further recommends that disability awareness and inclusive teaching practices should be included in pre-service and in-service teacher education programmes. Enhancing teachers' knowledge will contribute to building inclusive classrooms, enhance educational outcomes for children with intellectual disabilities and promote equitable access to quality primary education.

Keywords: Intellectual Disability, Teacher Knowledge, Primary School Teachers, Inclusive Education, Government Schools, Private Schools, Bhopal District.

Introduction

Teachers' knowledge plays an important role in the identification and management of developmental disorders and disabilities. It has been observed that early detection and timely referral to appropriate services significantly improve outcomes for children, as early intervention can reduce negative consequences, strengthen coping strategies and promote better social integration. Extensive research highlights the importance of early identification and intervention to address developmental challenges. Nevertheless, despite many studies on this topic, there is still an urgent need to investigate the depth of teachers' knowledge of common developmental disorders and their ability to accurately identify them. Teachers' responsibilities extend beyond academic teaching, as they are often the first to observe children's developmental progress in social, emotional and cognitive areas. Kindergarten and elementary school teachers, in particular, maintain long and frequent interactions with children, helping them detect subtle deviations from typical developmental patterns. These observational insights position teachers as key facilitators of early intervention, helping to prevent further deterioration in a child's performance or well-being. By identifying and addressing developmental problems at an early stage, educators can reduce the severity of disabilities and improve the overall quality of life of affected children (Sharma, U., Forlin, C., & Loreman, T., 2008).

In addition to identifying developmental concerns, teachers play an important role in the referral process. When adequately equipped with knowledge and resources, they can guide families to appropriate support services and ensure children receive the specialized interventions they need (Rosemary, P., & Chacko, J. (2021). Early referral to services such as speech therapy, occupational therapy or psychological support can address specific developmental challenges and contribute to better outcomes. Active participation of teachers in this process is useful in providing timely support, reducing long-term negative effects and promoting successful

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integration of children into regular educational environments (Ozer, D., Baran, G., & Aktop, A. (2013). Teachers' knowledge has a profound impact on the effectiveness of inclusive education. Successful inclusion requires teachers not only to identify developmental disorders, but also to adapt their teaching strategies to meet the diverse needs of students. This means creating a supportive and inclusive learning environment where all children have the opportunity to thrive. Strategies may include modifying lesson plans, incorporating assistive technologies, or implementing individualized instructional approaches tailored to students' specific needs.

The professional development and continuous training for teachers are important components for promoting effective inclusive education. With continued advances in the understanding of developmental disorders and increasing emphasis on inclusive practice, it is important for teachers to engage in lifelong learning (Collins, A., & Holmshaw, J. 2008). Training programs provide teachers with the knowledge, skills, and strategies needed to recognize developmental issues, implement appropriate interventions, and manage diverse classrooms with confidence. Such programs also increase teachers' capacity and confidence in meeting the challenges of inclusive education, ultimately improving learning outcomes for all students (Arcangeli, G., Caputo, A., & Gregori, E. (2020).

Purpose of the Study

The objective of this study was to assess the knowledge regarding intellectual disability of teachers in government and private primary schools in Bhopal District. The study was undertaken to compare the knowledge of teachers on the basis of demographic variables such as gender, age, educational qualification, teaching experience and type of school. It also aimed at identifying gaps in teachers' understanding of intellectual disability and providing recommendations for strengthening teacher training and promoting effective inclusive education practices.

Literature Review

Samina, *et al*. (2026) examined information and practices of school teachers in recognizing disabilities and determining related issues. An observational observation was conducted among hundred randomly decided lecturers from government and private colleges in Ernakulam district of Kerala. The strong connection between knowledge and practice underscores the importance of education. Notably, eighty% of instructors similarly expressed an interest in teaching LD that indicated readiness for specialized improvement. Thapa, Dhakal, Lamichhane, and Khatri (2024) stated that learning disabilities (LD) are a heterogeneous group of disorders characterized by significant challenges in listening, speaking, reading, writing, reasoning and mathematical abilities. Recognizing the central role of teachers in identifying LD and contributing to intervention strategies, the study conducted a study to evaluate the knowledge of primary school teachers in Madi Municipality, Chitwan. The results suggest that adequate knowledge among teachers is dangerously low, which may prevent timely identification and support for children with LD.

Sharma, Kaur, and Kaur (2022) highlighted that Learning disabilities (LD) include a range of disorders that affect specific academic skills, including reading (dyslexia), writing (dysgraphia) and mathematics (dyscalculia). In the Indian context, the estimated prevalence of LDS ranges from 9% to 39%, with 2–18% of primary school children having dyslexia, 14% having dysgraphia and 5.5% having dyscalculia. The study emphasizes the important role of teachers in identifying and managing children with learning disabilities, as early identification can have a significant impact on educational and developmental outcomes. The study concludes that although most primary school teachers have a moderate awareness of learning difficulties, there is still considerable room for improvement. Deshmukh and Gautam (2021) examined the effectiveness of a structured learning program to improve the education and knowledge of primary school teachers (LDS) of children was evaluated. Conducted in selected schools in Sangli, Miraj, Kupwad Corporation area, the study used a pre-test-post-test design to assess basic understanding and teachers' pedagogical intervention. The findings showed that teachers showed a moderate level of knowledge before the intervention, but generally had positive attitudes towards students with learning difficulties. Post-intervention analysis revealed significant improvements in teachers' knowledge and revealed that structured learning programs are effective tools for capacity building in inclusive education.

Dada and Saulman (2021) examined Teachers' knowledge of students with learning disabilities (LDS) Ilorin South Local Government Area, Kwara State, Nigeria. The study emphasized variation in knowledge level based on education, teaching experience and previous special education training. The study concluded that it is necessary to improve teachers' knowledge through targeted professional development, workshops and the inclusion of LD-focused content in teacher education. It is important to improve early detection, repair strategies and inclusive practices. The study emphasizes that informed and competent teachers are important to support the educational and psychological development of students with learning difficulties. Khana, Anupama, Rai, Munawatee, and Mandal, Punam Kumari (2021) examined an issue of learning disabilities and their impact on children's lifelong development. The study recognized that children with learning disabilities often do not meet expected educational standards, which not only hinders their educational progress, but also affects interpersonal situations, future employment opportunities and overall quality of life in later years.

Chaturvedi R. (2018) Emphasized is placed on inclusive education, where teachers play an important role in identifying, understanding and dealing with children with learning difficulties. The results indicated that many teachers had limited awareness of the complexity of learning disabilities, especially in diagnostic and remedial aspects. The review of this study emphasizes the importance of assessment interventions not only evaluating teachers' knowledge, but also being a practical resource for increasing it. Nair *et al*. (2017) emphasizes the important role that parent involvement and teacher awareness play in promoting positive learning outcomes. The Consensus Statement serves as a comprehensive outline to guide clinical practice and educational planning aimed at negotiating the intersection of First Identity and ID in the Indian context. By integrating medical, educational and psychological approaches, you emphasize the need for coordinated efforts to support children with learning disabilities and promote an inclusive educational environment.

Research Gap

Although many studies have been done regarding the awareness and attitude of teachers regarding intellectual disability, very few researches had been done comparing the

knowledge of teachers working in government and private primary schools, especially in the context of Bhopal District. Existing research has mainly concentrated on inclusive education or special education practices with relatively less attention paid to the investigation of teachers' knowledge of the features' identification and educational needs of children with intellectual disabilities in different school settings. Therefore, the current study seeks to bridge this gap by comparatively assessing teachers' knowledge of intellectual disability in government and private primary schools providing evidence to support effective teacher training and inclusive education practices.

Objective

To study the knowledge towards Intellectual Disability among Teachers in Government and Private Primary Schools in Bhopal District.

Research Design

The study is descriptive in nature and seeks to find the attitude of Private Primary School Teachers' Knowledge towards Intellectual Disabilities. The scale on GEM questionnaire developed by NIMH GEM Questionnaire/Reeta Peshawaria, D.K. Menon and Loraine Stephenson, is a standardized tool designed to assess teachers' knowledge regarding intellectual disabilities and inclusive education practices in 2000.

Reliability – r 0.80 -test retest

Validity -0.80

Data was collected from 150 teachers working in private primary schools of Bhopal District (Raisen, Sehore, Rajgarh, Vidisha and Bhopal). Through the convenience sampling method, the data was collected and through statistical tests, t-test and One Way ANOVA, the hypothesis were proved. In the present research, the reliability of the statements measuring the attitude among teachers is .890, it means that 89% questionnaire is reliable.

Results

H_{01}: There is no significant difference in the knowledge towards intellectual disability between male and female of Government Primary School Teachers.

Table 1: Knowledge towards intellectual disability between male and female of Government Primary School Teachers.

	Category	N	Mean	SD	t-value	p-value
Gender	Male	67	15.432	1.932	0.034	0.973>0.05
	Female	83	15.421	2.006		

The results reveal that male teachers (N = 67) obtained a mean knowledge score of 15.432 with a standard deviation of 1.932, while female teachers (N = 83) recorded a nearly identical mean score of 15.421 with a standard deviation of 2.006. The calculated *t*-value of 0.034 and the corresponding *p*-value of 0.973, which is greater than the 0.05 level of significance, indicate that the difference between male and female is statistically insignificant. Hence, the null hypothesis is accepted, suggesting that gender does not have a significant influence on the level of knowledge about intellectual disability among government primary school teachers. This finding indicates that both male and female teachers possess similar levels of awareness and comprehension regarding intellectual disability, likely attributable to analogous training opportunities, professional obligations, and exposure within the public education system.

H_{02}: There is no significant difference in the knowledge towards intellectual disability between Graduated with Professional Degree and PG and others of Government Primary School Teachers.

Table 2: Knowledge towards intellectual disability between Graduated with Professional Degree and PG and others of Government Primary School Teachers

	Category	N	Mean	SD	t-value	p-value
Education	Graduated with Professional Degree	75	15.840	2.066	2.623	0.010<0.05
	PG and others	75	15.013	1.781		

The results indicate that teachers with a professional graduate degree (N = 75) achieved a higher mean knowledge score of 15.840 (SD = 2.066), whereas teachers categorized as postgraduate and others (N = 75) obtained a lower mean score of 15.013 (SD = 1.781). The calculated *t*-value of 2.623 and the corresponding *p*-value of 0.010, which is less than the 0.05 level of significance, reveal a statistically significant difference between the two groups. Therefore, the null hypothesis is rejected, indicating that educational qualification has a significant influence on the level of knowledge about intellectual disability among government primary school teachers. This finding indicates that teachers with professional training have enhanced awareness and comprehension of intellectual disability, likely attributable to specialized coursework, practical experience, and pedagogical training incorporated in professional degree programs.

H_{03}: There is no significant difference in the knowledge towards intellectual disability among age group of Government Primary School Teachers.

Table 3: Knowledge towards intellectual disability among age group of Government Primary School Teachers.

	Category	N	Mean	SD	F-value	p-value
Age	Less 30 years	29	15.1379	1.72635	1.048	0.373>0.05
	31-40 years	42	15.1190	1.90253		
	41-50 Years	21	15.6667	2.22111		
	Above 50 Years	58	15.7069	2.02622		
	Total	150	15.4267	1.96734		

The results show that teachers below 30 years of age (N = 29) had a mean knowledge score of 15.1379 (SD = 1.72635), those aged 31–40 years (N = 42) recorded a mean score of 15.1190 (SD = 1.90253), teachers in the 41–50 years age group (N = 21) obtained a mean score of 15.6667 (SD = 2.22111), and teachers above 50 years (N = 58) reported a mean score of 15.7069 (SD = 2.02622). The computed F-value of 1.048 with a corresponding p-value of 0.373, which is greater than the 0.05 level of significance, indicates that the differences in mean knowledge scores across age groups are not statistically significant. Therefore, the null hypothesis is accepted, suggesting that age does not have a significant influence on the level of knowledge about intellectual disability among government primary school teachers. This finding implies that teachers across different age categories possess comparable levels of knowledge, likely due to similar professional exposure, training opportunities, and experience within the government education system.

H_{04}: There is no significant difference in the knowledge towards intellectual disability among experience group of Government Primary School Teachers.

Table 4: Knowledge towards intellectual disability among experience group of Government Primary School Teachers

	Category	N	Mean	SD	F-value	p-value
Experience	Less than 3 Years	17	16.2941	1.49016	1.557	0.202>0.05
	3-5 years	55	15.4545	2.05317		
	6-10 Years	35	15.0571	2.22212		
	Above 10 Years	43	15.3488	1.74416		
	Total	150	15.4267	1.96734		

The results indicate that teachers with less than three years of experience (N = 17) obtained the highest mean knowledge score of 16.2941 (SD = 1.49016), followed by those with 3–5 years of experience (N = 55) with a mean score of 15.4545 (SD = 2.05317), teachers with 6–10 years of experience (N = 35) recorded a mean score of 15.0571 (SD = 2.22212), and those with more than ten years of experience (N = 43) achieved a mean score of 15.3488 (SD = 1.74416). The calculated F-value of 1.557 and the corresponding p-value of 0.202, which exceeds the 0.05 level of significance, indicate that the observed differences among the experience groups are statistically insignificant. Therefore, the null hypothesis is accepted, suggesting that teaching experience does not have a significant influence on the level of knowledge about intellectual disability among government primary school teachers. This finding implies that teachers, irrespective of their length of service, possess relatively similar levels of knowledge, possibly due to uniform training frameworks, shared professional responsibilities, and common exposure to inclusive education practices within the government school system.

H_{05}: There is no significant difference in the knowledge towards intellectual disability between Private and Government Primary School Teachers.

Table 5: Knowledge towards intellectual disability between Private and Government Primary School Teachers.

	Category	N	Mean	SD	t-value	p-value
Knowledge	Private Primary School Teachers	150	16.606	2.191	4.907	0.000<0.05
	Government Primary School Teachers	150	15.426	1.967		

The results reveal that private primary school teachers (N = 150) obtained a higher mean knowledge score of 16.606 (SD = 2.191) compared to government primary school teachers (N = 150), who recorded a mean score of 15.426 (SD = 1.967). The calculated *t*-value of 4.907 and the corresponding *p*-value of 0.000, which is less than the 0.05 level of significance, indicate a statistically significant difference between the two groups. Therefore, the null hypothesis is rejected, suggesting that the type of school management has a significant influence on teachers' knowledge of intellectual disability. This finding implies that private primary school teachers possess relatively higher levels of awareness and understanding of intellectual disability than their government counterparts, possibly due to differences in training exposure, professional development opportunities, institutional emphasis on inclusive education, and access to updated pedagogical practices.

Conclusion

The study concludes that gender has no significant effect on the knowledge of intellectual disability among government primary school teachers. Male and female teachers had similar knowledge and awareness of intellectual disability indicating similar professional responsibilities, training opportunities and exposure to inclusive education has resulted in similar understanding among teachers irrespective of their gender. Results also show that educational qualification has a significant effect on the teachers' knowledge of intellectual disability. Teachers with professional educational qualifications have more knowledge and understanding than teachers with other educational backgrounds. This means that professional teacher education and specialized pedagogical training are important for improving teachers' competence to identify and address the educational needs of children with intellectual disability. The study also finds no significant effect of age on teachers' knowledge about intellectual disability. The knowledge and awareness levels are similar in all age groups of teachers indicating that knowledge is acquired through continuous professional exposure and training and not age specific. Similarly, teaching experience does not have significant effect on the knowledge of intellectual disability among the government primary school teachers. Similar to teachers' education in intellectual disability, regardless of the number of years spent in the teaching profession, which suggests that experience alone does not ensure greater understanding of intellectual disability without continuous professional development and specialized training. Finally, the study concluded that there is a significant difference in knowledge on intellectual disability between the teachers of government and private primary schools. Teachers of private primary school have comparatively higher level of knowledge and awareness than the teachers of government primary school. Our results suggest that institutional factors, such as teacher training, professional development programmes, organizational support and emphasis on inclusive education, may play a role in the differences in teachers' understanding of intellectual disability. In conclusion, the study emphasizes the importance of improving teacher education, continuous capacity building programmes and inclusive education training to improve the knowledge of teachers and to ensure the effective educational support for children with intellectual disabilities in all school settings.

Suggestions

- Performed in-provider training on intellectual disabilities regularly for government and private primary school teachers to upgrade them in their expertise and teaching competency.
- Integrate special education and inclusive school modules into pre-service coaching programs to prepare teachers to deal with the many expertise desires of children with profound intellectual disabilities.
- To organize workshops, seminars and cognition events on identification, assessment, classroom supervision and educational support for children with intellectual disabilities.
- Encourage teachers to participate in continuing

professional development (CPD) on disability inclusive education and evidence-based teaching practices.

- Develop and distribute teacher-friendly manuals, signs and resource materials on intellectual disabilities and techniques in inclusive classrooms.
- Promote multifaceted partnerships between schools, parents, special educators, mental health professionals and fitness and service professionals to provide comprehensive support for young people with intellectual disabilities.
- Regular orientation programs for newly hired teachers to increase their understanding of intellectual disability and inclusive school practices.
- Provide technical assistance and guidance to reading room teachers through the expanded availability of special education teachers and useful resource men and women in schools.
- Encourage schools to organize attention and sensitivity programs to develop beneficial attitudes towards mentally disabled children among teachers, students and parents.
- Increase access to assistive technology, teaching-learning products, and inclusive instructional materials to facilitate powerful teaching in lecture halls.
- Government and education authorities should formulate regulations to encourage mandatory regular training for all primary school teachers on intellectual disability and inclusive education.
- Facilitate sharing experience forums for teachers to share enjoyable practices, modern teaching techniques, and success classroom interventions related to inclusive teaching.
- Strengthen monitoring and evaluation systems to frequently monitor teachers' knowledge and application of inclusive practice practices.
- Urge departments to create inclusive learning environments that provide equitable instructional opportunities and appropriate support services for children with intellectual disabilities.
- Develop partnerships between universities, teacher education programmes, NGOs and authority groups to establish whole capacity building programs and study projects to enhance trainers' knowledge and inclusive education practices.

Future Research Scope

- Future research can be conducted with a larger sample size from specific districts, states, or territories to improve the generalizability of the findings.
- These studies can be extended to teachers in middle and high schools as well as educators practicing in preschool and special education settings.
- Future researchers can examine instructors' knowledge, attitudes, beliefs, self-efficacy, and classroom practices in the presence of children with intellectual disabilities.
- Future research should examine the impact of professional development programs, workshops, and inclusive school education on teacher effectiveness.
- The study can look at the relationship between teachers' knowledge of intellectual disability and students' academic achievement, social inclusion, and classroom participation.
- Future research should explore the impact of virtual technology, assistive devices and advanced learning methods on educational outcomes in young people with intellectual disabilities.
- International or cross-cultural comparative research is conducted to research best practices in teacher education and inclusive education for students with intellectual disabilities worldwide.
- Future research could examine the effects of coverage interventions and teacher education reform on improving teachers' knowledge and skills in assisting newcomers with intellectual disabilities.

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